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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/605,492

Filing Date: October 02, 2003

Appellant(s): KRUEGER, RALF

MAILED

SEP 1 U 2007

GROUP 2800

C. Paul Maliszewski
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed June 22, 2007 appealing from the Office action

mailed September 22, 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,777,783	ENDOU	7-1998
6,687,052	WILSON	2-2004
6,057,894	KOBAYASHI	5-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endou (US 5,777,783).

Endou teaches an apparatus for implementing phase-contrast or modulation contrast observation on microscopes with the aid of a modulator (26b) arranged in each pupil plane (col. 10 lines 30-31) in the observation beam path and containing at least one layer modifying the phase or amplitude (col. 10 lines 28-30) and a stop (6) arranged in the illumination beam path (Fig. 1) and a portion of at least one layer modifying the phase or amplitude is transmissive (Fig. 1). Endou further teaches the modulator are arranged on a carrier in a manner introducible into the beam path of the microscope (col. 13 lines 5-10). Endou lacks specific reference to dynamically tilting the modulator. Endou does suggest that rotation of the modulator can be required in a modulation contrast image (col. 13 lines 6-8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the modulator of Endou dynamically tiltable as suggested by Endou for the purpose of allowing for modulation contrast without having to remove the modulator and replace it with another modulator.

Claims 2, 8, 9 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Endou (US 5,777,783) in view of Wilson (US 6,687,052).

Regarding claim 2, Endou teaches the invention as claimed but lacks reference to the greatest possible phase shift achieved by a slight tilt. Wilson teaches the modulator configured so that the greatest possible phase shift is achieved by a slight tilt (col. 3 lines 56-58). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Endou reference have the modulator configured in the manner taught by Wilson for the purpose of minimizing the amount of rotation required by the modulator to achieve the greatest phase shift so that the modulator would not require a space large enough to rotate 180-degrees and thus reduce the size of the microscope apparatus as a whole.

Regarding claims 8 and 9, Endou teaches the invention as claimed but lacks reference to the use of a defined variable layer configuration. Wilson teaches a variable layer configuration (col. 3 lines 25-55). The pattern of modulators on the modulating element (6) is a variable layer configuration because the modulation of the incident light varies at different locations on the element. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Endou invention include the variable layer configuration of Wilson for the purpose of allowing the use of a single modulator to perform different modulations depending on the area of the element light contacts.

Regarding claim 11, Endou teaches the invention as claimed but lacks reference to the use of retardation plates. Wilson teaches the use of retardation plates for use with polarization modulation (col. 3 lines 18-19). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Endou invention include the retardation plates of Wilson for the purpose of rotating the polarization to allow for as much light intensity to pass through as possible, thus providing a better image to the observer.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Endou (US 5,777,783) in view of Kobayashi (US 6,057,894).

Endou teaches the invention as claimed but lacks reference to one layer comprising glass plates of various glasses. Kobayashi teaches the use of a glass layer coupled to a modulator (col. 6 lines 4-25) for the purpose of supporting the modulating layer in a high heat environment. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Endou modulator include the glass layer of Kobayashi for the purpose of supporting the modulating layer in a heated environment, where the heat originates from the light energy of the Endou invention.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Endou (US 5,777,783) in view of Kobayashi (US 6,057,894) as applied to claim 3 above, and further in view of Wilson (US 6,687,052).

Endou in combination with Kobayashi teaches the invention as claimed but lacks reference to the use of a defined variable layer configuration. Wilson teaches a variable layer configuration (col. 3 lines 25-55). The pattern of modulators on the modulating element (6) is a variable layer configuration because the modulation of the incident light varies at different locations on the element. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Endou in combination with Kobayashi invention include the variable layer configuration of Wilson for the purpose of allowing the use of a single modulator to perform different modulations depending on the area of the element light contacts.

(10) Response to Argument

Applicant argues the rotating taught by Endou is not the same as the tilting claimed in the current application. The examiner interprets tilting to be a subset of rotating. Tilting means, “to move or shift as to incline” (Appellant’s Brief page 11). Rotate means, “to turn about an axis or center” (Appellant’s Brief page 11). As shown by the definition tilting is limited as to the axis about which the element turns to adjust the inclination of the element. The definition of rotate has no such limitation. The axis about which something is rotated may be any axis, including an axis that would adjust the inclination of the element. The appellant’s modulator turns about an axis perpendicular to the optical axis as seen in appellant’s Figs. 1 and 3 combined. The suggestion by the Endou to rotate may include turning about an axis perpendicular to the optical axis similar to the appellant’s.

Applicant argues Endou teaches away from not removing the modulator. The examiner interprets the teaching of rotate to be a potential alternative to the removal of the modulator. The Endou reference may focus on exchanging modulators but it also provides a teaching that a similar effect can be achieved through rotation.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the

applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Joshua L Pritchett



Conferees:

Stephone B Allen



Ricky Mack

